REMARKS

The Office Action dated December 8, 2005, has been received and carefully noted. The above amendments to the claims, and the following remarks, are submitted as a full and complete response thereto.

Claims 8, 13 and 14 have been amended to more particularly point out and distinctly claim the subject matter of the invention. No new matter is presented and no new issues are raised which require further consideration and/or search. Therefore, claims 8-18 are respectfully submitted for consideration.

Claims 8-12 were rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the invention. Specifically, according to the Office Action "said parallel standard PCM signals" lack proper antecedent basis. Claim 8 has been amended to overcome this rejection. Thus, Applicant request that this rejection be withdrawn.

Claims 8-18 were rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,793,760 to Chopping in view of Admitted Prior Art (APA). According to the Office Action, Chopping teaches all of the elements of claims 8-18, except for the second interface unit including rate adaptation means for adapting the bit rate of the packet data stream to correspond to the capacity of the payload portion allocated to the packet stream, the output of the rate adaptation means being directly connected to the multiplexing means. Thus, the Office Action combined the teaching of Chopping with alleged APA to yield all of the elements of claims 8-18. The rejection is traversed as

being based on references that neither teach nor suggest the novel combination of features clearly recited in independent claims 8, 13 and 14.

Claim 8, upon which claims 9-12 depend, recites a network element for a telecommunications network. The network element includes a first interface unit for receiving parallel standard PCM signals in the network element, the parallel standard PCM signals being first level signals in a Plesiochronous Digital Hierarchy and a second interface unit for receiving a packet data stream. The network element also includes multiplexing means; operationally connect to the first and second interface units, for receiving the parallel standard PCM signals from the first interface unit, wherein the parallel standard PCM signals are not multiplexed and, for directly multiplexing the parallel standard PCM signals and the packet data stream on a time-division basis into a transmission frame. A total capacity of a payload portion of the frame essentially corresponds to the capacity of N PCM signals. The multiplexing means are provided with configuring and allocating means for dividing the total capacity of the payload portion between at least two parts of variable capacity. Each part is configured to be allocated a desired portion of the total capacity of the payload portion in accordance with a current transmission requirement, and for allocating a part with the desired capacity to at least one traffic source from a group in which a number of PCM signals constitutes a first traffic source and a number of packet data streams constitutes a second traffic source. The second interface unit includes rate adaptation means for adapting bit rate of the packet data stream to correspond to the capacity of the payload portion allocated to

the packet stream. The output of the rate adaptation means being directly connected to said multiplexing means.

Claim 13 recites a network element for a telecommunications network configured to receive parallel standard PCM signals in a first interface unit of the network element, the parallel standard PCM signal being first level signals in a Plesiochronous Digital Hierarchy and to receive a packet data stream in a second interface unit of the network element. The network is also configured to receive the parallel standard PCM signals from the first interface unit, wherein the parallel standard PCM signals are not multiplexed, and directly multiplex the parallel standard PCM signals and the packet data stream on a time-division basis into a transmission frame. A total capacity of the payload portion of the frame essentially corresponds to the capacity of N PCM signals. The multiplexing is configured to divide the total capacity of the payload portion between at least two parts of variable capacity. Each part is configured to be allocated a desired portion of the total capacity of the payload portion in accordance with a current transmission requirement, and to allocate a part with the desired capacity to at least one traffic source from a group in which a number of PCM signals constitutes a first traffic source and a number of packet data streams constitutes a second traffic source. The network element is also configured to adapt a bit rate of the packet data stream to correspond to the capacity of the payload portion allocated to the packet stream in the second interface unit directly before multiplexing.

Claims 14, upon which claims 15-18 depend, recite a method for multiplexing in a telecommunications network. The method includes receiving parallel standard PCM signals in a first interface unit of a network element, the parallel standard PCM signal being first level signals in a Plesiochronous Digital Hierarchy and receiving a packet data stream in a second interface unit of the network element. The method also includes receiving the parallel standard PCM signals from the first interface unit, wherein the parallel standard PCM signals are not multiplexed and, directly multiplexing the parallel standard PCM signals and the packet data streams on a time-division basis into a transmission frame, a total capacity of the payload portion of the frame essentially corresponding to the capacity of N PCM signals. The method further includes dividing the total capacity of the payload portion between at least two parts of variable capacity. Each part is allocated a desired portion of the total capacity of the payload portion in accordance with the current transmission requirement. The method also includes allocating a part with the desired capacity to at least one traffic source from a group in which a number of PCM signals constitutes a first traffic source and a number of packet data streams constitute a second traffic source. The method further includes adapting bit rate of the packet data stream in the second interface unit to correspond to the capacity of the payload portion allocated to the packet stream directly before multiplexing.

As outlined below, Applicants submit that Chopping, when taken alone or when combined with the APA, does not teach or suggest the elements of claims 8, 13 and 14.

Chopping discloses a multiplex format comprising a plurality of constant bit rate time slots wherein a time slot which is not in use for constant bit rate traffic is used for message based traffic to provide a composite constant bit rate/message based data stream. Chopping is arranged to offer a mixed capability, i.e. to carry a varying mix of 64 kbit/s circuits and ATM circuits on a single 2048 kbit/s carrier, without having to transform 64 kbit/s to ATM or ATM to 64 kbit/s.

Applicants submit that Chopping fails to teach or suggest the combination of elements recited in claims 8, 13 and 14. Each of claims 8, 13 and 14, in part, recites receiving parallel standard PCM signals in a first interface unit of a network element, the parallel standard PCM signal being first level signals in a Plesiochronous Digital Hierarchy, receiving a packet data stream in a second interface unit of the network element, receiving the parallel standard PCM signals from the first interface unit, wherein the parallel standard PCM signals are not multiplexed, and **directly multiplexing** the **parallel** standard PCM signals **and** the **packet data streams** on a time-division basis into a transmission frame. As such in the claimed invention, the parallel standard first level PDH signals are thus **directly multiplexed** with a packet data stream. Col. 7, lines 62-65 of Chopping teaches that standard transmission formats with intermediate higher order multiplexes are used. The general, teaching of Chopping is in line with the background of the invention, as discussed on page 1 of the present application, where a number of lower hierarchy level signals are multiplexed to a single upper level signal.

In the "Response to Arguments" section, the Office Action alleges that the claims of the present invention do not recite "a multiplexer for directly multiplexing parallel E1 and T1 signals and ATM signals into a output frame" because the claims does not state the first interface for receiving and outputting the parallel PCM signals to the multiplexing device. Applicants submit that each of claims 8, 13, and 14 recites "multiplexing **parallel** standard PCM signals and the packet data stream, as noted above. The use of the word "parallel" in the independent claims shows that the PCM signals are not already multiplexed to some degree at the time of multiplexing them with the packet data stream. Accordingly, the current independent claims support "a multiplexer for directly multiplexing parallel E1 and T1 signals and ATM signals into a output frame."

Applicants submit that there is a clear difference between N parallel signals of a given hierarchy level, as recited in the present claims, and one upper hierarchy level signal containing multiplexed N signals of a lower hierarchy level, as recited in Chopping. Applicants further submit that the processing of the parallel signals, as recited in the present claims, is different from the processing of multiplexed signals, as recited in Chopping. In Chopping, a multiplexed signal is further multiplexed with a signal carrying ATM data.

Referring specifically to figures 9 and 10 of Chopping, the use of intermediate higher order multiplexer means that a plurality of parallel 2048 kbit/s signals are first multiplexed to a TU VC4 in the SDH TERMINAL MUX unit. Only thereafter is the TU VC4 multiplex signal multiplexed with the ATM VC4 signal. In the MUX in Figure 9 of

Chopping, thus, a pair of VC4 signals is multiplexed. Figure 10 of Chopping is expressly shown to represent the arrangement of figure 9 as a combined unit (Col. 2, lines 8-9). Thus, in figures 9 and 10 of Chopping, there is no direct multiplexing of parallel 2048 kbit/s signal with an ATM signal as recited in the presently pending claims.

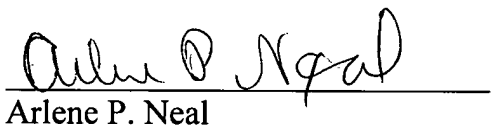
Similarly, the marking "16x 2 Mbit/s" in figures 19 and 20 of Chopping does not refer to 16 parallel 2 Mbit/s signal. This marking refers to one 34 Mbit/s signal, which contains 16 multiplexed 2 Mbit/s signals. This is expressly mentioned in Col. 11, lines 35-43 of Chopping, where reference is made to a pair of 34 Mbit/s third order systems (that is third hierarchy level signals), one carrying 16 2048 kbit/s signals and the other carrying ATM cells. Thus, Applicants submit that Chopping does not disclose or suggest multiplexing parallel standard hierarchy level signals with a packet data stream as recited in claims 8, 13 and 14. Chopping, in fact, teaches away from the claimed invention, as Chopping uses intermediate multiplexing of the first hierarchy level signal before multiplexing with a packet data stream. Therefore, Applicants respectfully assert that the rejection under 35 U.S.C. §103(a) should be withdrawn because neither Chopping nor the APA, whether taken singly or combined, teaches or suggests each feature of claims 8, 13 and 14 and hence, dependent claims 9-12 and 15-18 thereon.

As noted previously, claims 8-18 recite subject matter which is neither disclosed nor suggested in the prior art references cited in the Office Action. It is therefore respectfully requested that all of claims 8-18 be allowed and this application passed to issue.

If for any reason the Examiner determines that the application is not now in condition for allowance, it is respectfully requested that the Examiner contact, by telephone, the applicants' undersigned attorney at the indicated telephone number to arrange for an interview to expedite the disposition of this application.

In the event this paper is not being timely filed, the applicants respectfully petition for an appropriate extension of time. Any fees for such an extension together with any additional fees may be charged to Counsel's Deposit Account 50-2222.

Respectfully submitted,



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